

Work Order ID 82229

82229

Page 1

March-27-12 10:07:00 AM

Item ID: D350-636-011

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Skidtube LH

Start Date: 27/03/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 10/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/03/27 Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2750	F								
D3492	C								

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-011 CHG 006

Handwritten: MLJ 12-4-16

B82229 LH

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Skidtubes	0.00							
110									
Skidtubes	Memo	0.00							
Skidtubes	1- Pick D2600-3 Bent								
	2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750								
	3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.								
	4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting								
	5- Drill only two fwd step holes using DT9616. Ensure proper positioning.								
	6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)								
	7- Clecko DT8863B on second side of tube and drill pilot holes for detail B. ***SECOND SIDE***								
	8-Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail C to 0.500" (8 holes per side)								
	9-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".								
	10-Open up holes of Detail A to 0.297" (total of 2 holes per side)								

30 12/03/30

W/O:		WORK ORDER CHANGES					
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Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left
from bending as per QSI 004
A/R Aluminum Rod batch: M120164 BE 12/03/10

12-Grind welds flush as per Dwg D2750

EDD 12-04/02

120

120

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

Sizbator

130

130

QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Sizbator

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Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

OK / RM 12-4-2

150

QC3- Inspect Part Finish

0.00

150

QC

Memo

0.00

Quality Control

SAD 12-04-03 PTO

W/O: 82229

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-04-03	150	change Qc 3 to Qc7 Done <i>HJ</i>					

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Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

0.00

160

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open up holes of Detail C and ground handling to 0.625" (total of 8 holes per side)
as per dwg D2750.2-Open up holes of Detail B to 0.750" (total of 4 holes per side)
as per dwg D2750.

3- Open float hole to 0.500" (4 per side)

4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750
(welding instructions on sheet 8)

5-Deburr and blow out all chips from inside of tube

6- Prepare tube for welding, remove alodine as required.

7-Bond web D2739 in place as per OSI 015

A/R Sikaflex-291

batch: M120813
exp. date: 12-8-138- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004
(welding instructions on sheet 8)

A/R Aluminum Rod

batch: M120164

9- At section AJ-AJ drill out x-bolt spacer to 0.404"

10-Grind welds flush as per Dwg D2750

B 12/04/03

D 12-4-3

306 12/04/04

280 12-04-05

W/O:		WORK ORDER CHANGES					
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Required Date: 10/04/2012 Req'd Qty: 1.00

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Customer:

Reference:

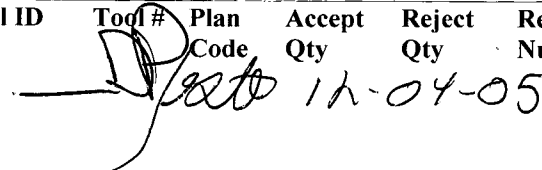
Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

11-Spot face ground handling holes section (total of 4 places per side) as per
dwg D2750

12-Deburr holes

170

QC10- Inspect visual per QSI004- ground welds

0.00

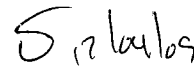
170

QC

Memo

0.00

Quality Control



180

QC5- Inspect part completeness to step on W/O

0.00

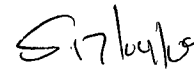
180

QC

Memo

0.00

Quality Control



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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	Pressure Wash per QSI005 4.3	0.00							
190									
HandFinish	Memo	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.								
200	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
200									
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 7:20 OVEN TEMPERATURE: 3200F FINISH TIME: 7:50								
210	QC Inspect Chemical Conversion Coat	0.00							
210									
QC	Memo	0.00							
Quality Control	Inspect for foreign object per QSI 024								

1 BR 12-4-9

IX 12/04/11

1 LH 0 12/10/12

W/O:		WORK ORDER CHANGES					
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Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	HandFinishing	0.00							
220									
HandFinish	Memo	0.00							
Hand Finishing	✓ 1- Install inserts as per Dwg D2750								
230	HandFinishing	0.00							
230									
HandFinish	Memo	0.00							
Hand Finishing	✓ 1-Inspect for Foreign Objects								
	✓ 2-Spray inside of tube with "LPS-3" batch: <u>N/A</u>								
	3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750								
	✓ SIKA FLEX 241								
	BATCH: <u>120318</u>								
	EXP DATE: <u>12/08</u>								
	✓ 4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube								
	A/R 55-o'ring lube batch: <u>N/A 110348</u>								
	✓ 5-Coat all exposed fasteners with "LPS Procyon" batch: <u>N/A 114596</u>								

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	QC5- Inspect part completeness to step on W/O	0.00							
240									
QC	Memo	0.00							
Quality Control									
250	Pick Kit	0.00							
250									
Packaging	Memo	0.00							
Packaging									
260	QC4- 100% Inspect kits for completeness	0.00							
260									
QC	Memo	0.00							
Quality Control	*****ensure antiseize is on AN8C21A bolts*****								

5/2/12

6/12/12

5/7/13

10

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
270	Packaging					1x			SP
Packaging	Memo	0.00							
Packaging	Package as per PPP D350-636-011	72							12-04-17
		Rev I							
280		0.00							
280	QC21- Final Inspection - Work Order Release								12/4/19
QC	Memo	0.00							
Quality Control									

12-04-18

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Page 1

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82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:I 02.09.25 Rearranged procedure steps KJ
 IPP Rev:J 06-03-23 As per Rev D JLM
 IPP Rev:K 06-07.13 As per dsi9343 EC
 IPP Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM Verf:EC
 IPP Rev:M 08-04-22 update steps 4, 13 DD verified by:EC
 IPP Rev:N 08-09-23 revF as per dwg DD verified by:ec
 IPP Rev:O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
 DD verf:EC IPP Rev:P 10.06.22 revise
 seq110 DD verf:EC IPP Rev:Q 10.10.01 as per IIN revH
 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3492-1		Manufactured	No			230	Each	94.0000	8	8			
D3492-1									**			12/04/12	
Plug													

Location	Loc Qty	Loc Code
FP002	94	
69531	8	
74444	2	
76235	4	
77037	80	

D3492-3		Manufactured	No			230	Each	33.0000	8	8			
D3492-3									**			1381967	(x2) 11/04/12
Plug													

Location	Loc Qty	Loc Code
FP-A	33	
78600	33	

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D350-636-011

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

NAS1611-010

Purchased

No

230

Each

273.0000

8

8

NAS1611-010

O-RING

**

ll

12/04/12

Location

Loc Qty

Loc Code

FP

50

110915

0

120770

50

FP001

223

110915

14

117460

8

118077

1

118612

3

119438

47

120986

50

121166

100

X 8

NAS1149D0863J

Purchased

No

250

Each

227.0000

2

2

NAS1149D0863.J

WASHER

**

Location

Loc Qty

Loc Code

ST298

227

118078

36

119307

91

120308

100

119307

D2744

Manufactured

No

110

Each

52.0000

1

1

D2744

Cap

**

BE 12/03/10

Location

Loc Qty

Loc Code

LG002

52

62715

1

70881

8

71861

1

78900

42

1

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Shop Packet Print

Page 2

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Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2600-3-BENT

Manufactured No

110 Each

15.0000 1

D2600-3-BENT

Extrusion Bent

**

① BE 12/03/30 X

Location

82347

Loc Qty

Loc Code

LG

15

66875

7

73253

1

75021

1

75022

1

75023

1

81330

4

D2743

Manufactured No

160 Each

176.0000 8

D2743

Crossbolt Spacer

**

BE 12/04/04

Location

Loc Qty

Loc Code

LG001

176

67766

4

68251

3

73403

64

74445

1

78603

4

79517

100

D2739

Manufactured No

160 Each

10.0000 1

D2739

350 I Beam

**

1 HG 12-4-3

Location

Loc Qty

Loc Code

LG

10

72155

1

81508

9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 4

Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3490-3 Manufactured No

160

Each

2.0000

4

4

D3490-3

Cross Bolt Spacer

BE12/04/04
B 8206 x 4

Location

Loc Qty

Loc Code

LG001

2

78800

2

D3490-1 Manufactured No

160

Each

13.0000

4

4

D3490-1

Cross Bolt Spacer

BE12/04/04
B 81976 x 4

Location

Loc Qty

Loc Code

LG001

13

62450

2

74875

4

77042

3

78793

4

ALS4-1032-225 Purchased No

220

Each

953.0000

38

38

AI S4-1032-225

Insert

u u104112

Location

Loc Qty

Loc Code

ST281

930

108696

146

110768

62

118386

55

118966

68

120671

599

ST282

23

120410

10

120451

13

x 38

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3793-3

Manufactured No

230

Each

24.0000

1

1

D3793-3

Wearshoe

**

HL

12/04/12

Location

Loc Qty

Loc Code

FP001

12

80434

12

FP002

12

78935

12

X1

AN8C35A

Purchased No

230

Each

62.0000

1

1

AN8C35A

BOLT

**

HL

12/04/12

Location

Loc Qty

Loc Code

FP002

61

115960

1

117834

8

118286

52

X-1

ST346

1

114442

0

115188

0

115960

1

D3793-1

Manufactured No

230

Each

16.0000

1

1

D3793-1

Wearshoe

**

HL

12/04/12

Location

Loc Qty

Loc Code

FP001

16

77029

4

78901

12

X1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Work Order ID: 82229

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

82229

D350-636-011

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3488-041

Manufactured No

230

Each

15.0000

1

1

D3488-041

Blade Fitting Assembly, LH

**

M 12/04/12

Location

Loc Qty

Loc Code

FP002

15

61689

1

75056

6

77021

8

X

D3794-3

Manufactured No

230

Each

29.0000

1

1

D3794-3

Gasket

**

M 12/04/12

Location

Loc Qty

Loc Code

FP002

29

74530

2

78895

3

80436

24

X

AN6C44A

Purchased No

230

Each

195.0000

4

4

AN6C44A

BOLT

**

M 12/04/12

Location

Loc Qty

Loc Code

FG

2

103964

2

ST343

193

120143

25

120465

27

120641

21

121013

20

121167

100

X

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

230

Each

79.0000

1

1

MS21083C8

NUT

**

11/04/12

11/04/12

Location

Loc Qty

Loc Code

FP002

1

115884

1

ST303

12

115884

0

118077

1

119309

2

119436

7

119638

2

ST304

66

120142

16

120731

25

121011

25

X1

D3536-25

Manufactured

No

230

Each

14.0000

1

1

D3536-25

Gasket

**

11/04/12

11/04/12

Location

Loc Qty

Loc Code

FP002

14

78902

14

Manufactured

No

230

Each

291.0000

8

8

D3631-1

D3631-1

Washer

**

11/04/12

11/04/12

Location

Loc Qty

Loc Code

FG

100

81874

100

ST072

191

68062

2

75548

189

X8

March-27-12 10:07:05 AM

Shop Packet Print

Page 7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 8

Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3791-1

Manufactured No

230 Each

15.0000 1 1

D3791-1

Wearplate

**

del 12/04/12

Location

Loc Qty

Loc Code

FP002

15

62239

2

75041

1

78897

12

AN960C10L

NAS1149C0332

Purchased

No

230 Each

0.0000 38 38

AN960C10I

washer

D2745

Manufactured No

230 Each

112.0000 8 8

D2745

Bushing

**

12/12/255 (x38) del 12/04/12

**

del 12/04/12

Location

Loc Qty

Loc Code

FP

100

79518

100

FP001

12

69529

1

76142

1

78597

10

x2

x

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Purchased

No

230

Each

1,316.000

34

34

AN3C5A

Bolt

**

12/04/12

Location

Loc Qty

Loc Code

FP001

7

115835

7

ST350

1309

116419

28

117343

13

117764

7

117872

2

119749

23

120423

736

1210168

500

1381361 (x3)

D3537-1

Manufactured

No

230

Each

87.0000

3

3

D3537-1

Wearpad

**

1381361 (x3)

Location

Loc Qty

Loc Code

FP001

82

79833

28

79835

54

FP002

5

69817

5

NAS1149C0832R

Purchased

No

230

Each

301.0000

1

1

NAS1149C0832R

WASHER

**

12/04/12

Location

Loc Qty

Loc Code

ST297

301

114915

301

1

March-27-12 10:07:06 AM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 10

Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN3C6A

Purchased

No

230

Each

561.0000

4

4

AN3C6A

BOLT

**

M 12/04/12

Location

Loc Qty

Loc Code

FP001

1

111982

1

ST351

560

111982

2

116419

23

116549

2

116704

12

117619

10

117688

1

117872

5

118422

13

119449

21

120423

71

120693

400

X4

NAS1611-013

Purchased

No

230

Each

232.0000

8

8

NAS1611-013

O-RING

**

M 12/04/12

Location

Loc Qty

Loc Code

FP001

232

116582

5

117291

2

117887

53

119623

36

120910

36

121166

100

Y6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 82229

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

82229

D350-636-011

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230

Each

17.0000

1

1

D3535-25

Wearshoe

**

Handwritten: 12/04/12

Location

Loc Qty

Loc Code

FP001

14

62233

1

80331

13

FP002

3

77617

3

D3794-1

Manufactured No

230

Each

22.0000

1

1

D3794-1

Gasket

**

Handwritten: 12/04/12

Location

Loc Qty

Loc Code

FP002

22

75042

10

80435

12

MS21043-6

Purchased No

230

Each

797.0000

4

4

MS21043-6

NUT

**

Handwritten: 12/04/12

Location

Loc Qty

Loc Code

FG

20

103693

20

ST301

777

112314

71

117887

6

118384

200

120308

500

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 12

Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3493-1

Manufactured No

250

Each

62.0000

2

2

**

D3493-1

Washer

Location

Loc Qty

Loc Code

ST050

62

70697

2

77573

20

78835

40

78835

MS21083C8

Purchased No

250

Each

79.0000

2

2

**

MS21083C8

NUT

Location

Loc Qty

Loc Code

FP002

1

115884

1

ST303

12

115884

0

118077

1

119309

2

119436

7

119638

2

ST304

66

120142

16

120731

25

121011

25

120731

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 13

Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN8C21A

Purchased

No

250

Each

87.0000

2

2

**

AN8C21A
BOLT

Location

Loc Qty

Loc Code

ST343

87

118758

5

120094

38

120872

4

121067

20

121167

20

120094

NAS1515H3L

Purchased

No

230

Each

172.0000

4

4

**

NAS1515H3I
WASHER

Location

Loc Qty

Loc Code

FG

40

102472

40

ST277

132

118686

3

119438

1

120072

32

120360

96

X-1

D2741

Manufactured

No

250

Each

33.0000

1

1

**

D2741
Blade, 350 Skidtube

Location

Loc Qty

Loc Code

ST

-10

ST466

43

71856

1

76984

32

76984

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 82229

82229

Parent Item: D350-636-011

D350-636-011

Parent Item Name: Skidtube LH

Start Date: 27/03/2012

Required Date: 10/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3532-1

Manufactured No

250

Each

39.0000

2

2

D3532-1

Spacer

**

Handwritten signature and date 12/4/12

Location

Loc Qty

Loc Code

ST053

39

78839

39

78839

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: N/A
- IDENTIFICATION: N/A
- WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- WELD PER DART QSI 004
- INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY. CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL Δ
- SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL Δ

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

WITHOUT NOTICE
WORK ORDER
NO. 82229 MLJ
12/03/27

RELEASED
82-37-27

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3535-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L; REMOVE QTY (10) NAS1515H8L; REMOVE D2741. QTY (2) AN960C816; REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	<u>PD</u>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	<u>REH</u>		
CHECKED	<u>ALC</u>	DRAWING NO.	REV. F
MFG. APPR.	<u>ALC</u>	D2750	SHEET 1 OF 11
APPROVED	<u>ALC</u>	TITLE	SCALE
DE APPR.	<u>ALC</u>	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

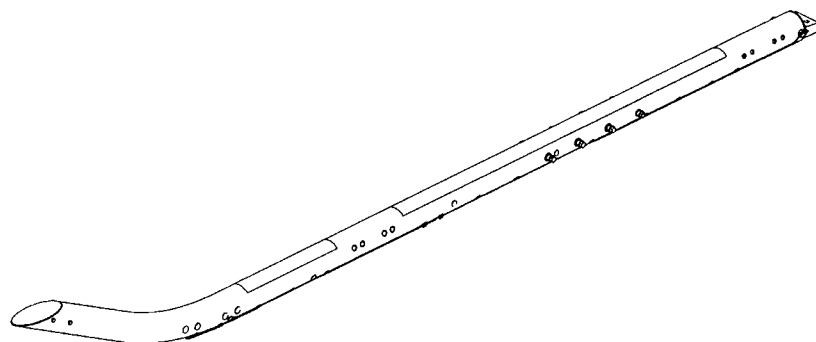
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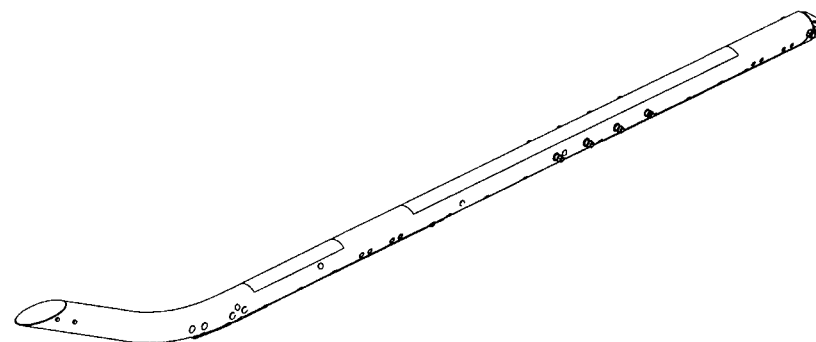
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

82229



D2750-041 350 SKIDTUBE ASSEMBLY, LH



D2750-042 350 SKIDTUBE ASSEMBLY, RH

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08-09-22/11

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

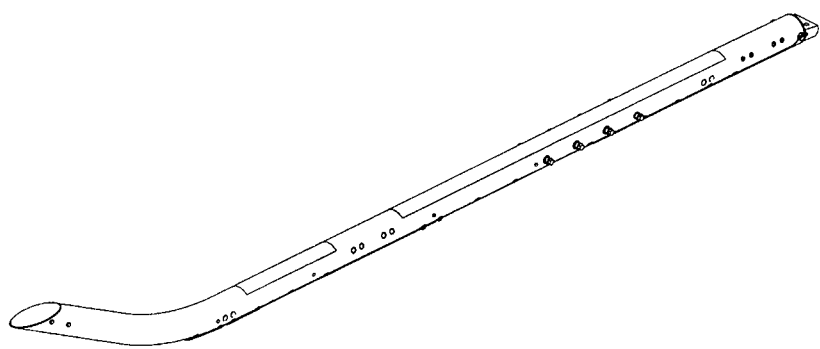
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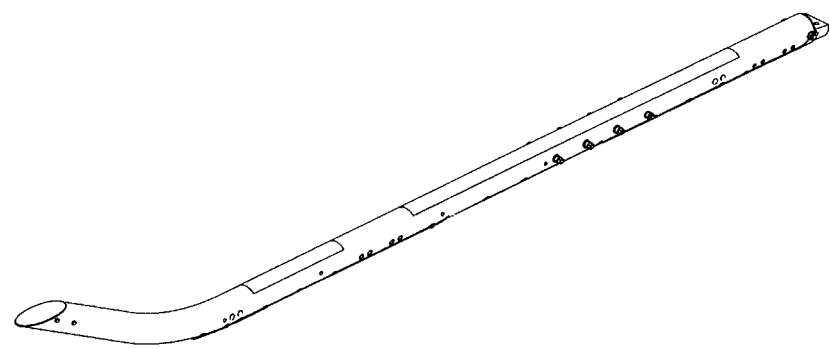
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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82229



D2750-043 350 SKIDTUBE ASSEMBLY, LH



D2750-044 350 SKIDTUBE ASSEMBLY, RH

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68-9-227-111

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MFG. APPR.	DA	SHEET 3 OF 11	
APPROVED	DA	TITLE	SCALE
DE APPR.	DA	350 SKIDTUBE ASSEMBLY	NTS
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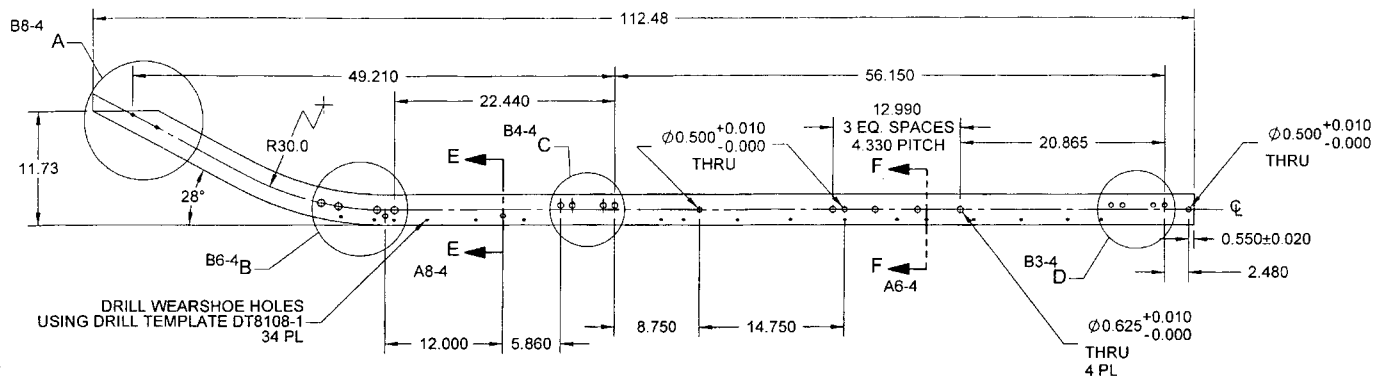
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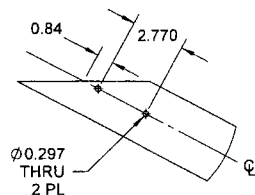
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

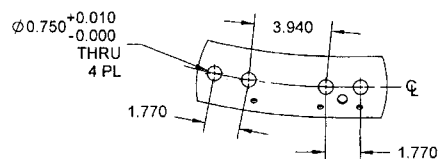
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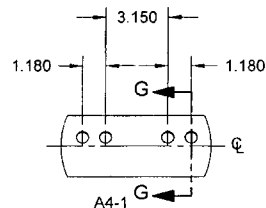
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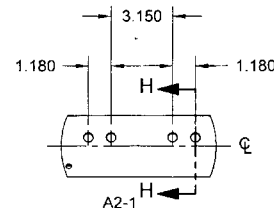
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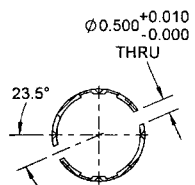
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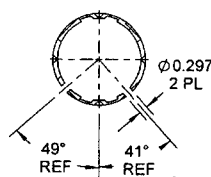
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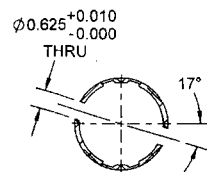
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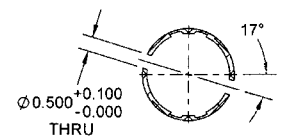
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

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CHECKED	PH	DRAWING NO. D2750	REV. F
MFG. APPR.	PH	SHEET 4 OF 11	
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	350 SKIDTUBE ASSEMBLY	
DATE	08.07.16	NTS	

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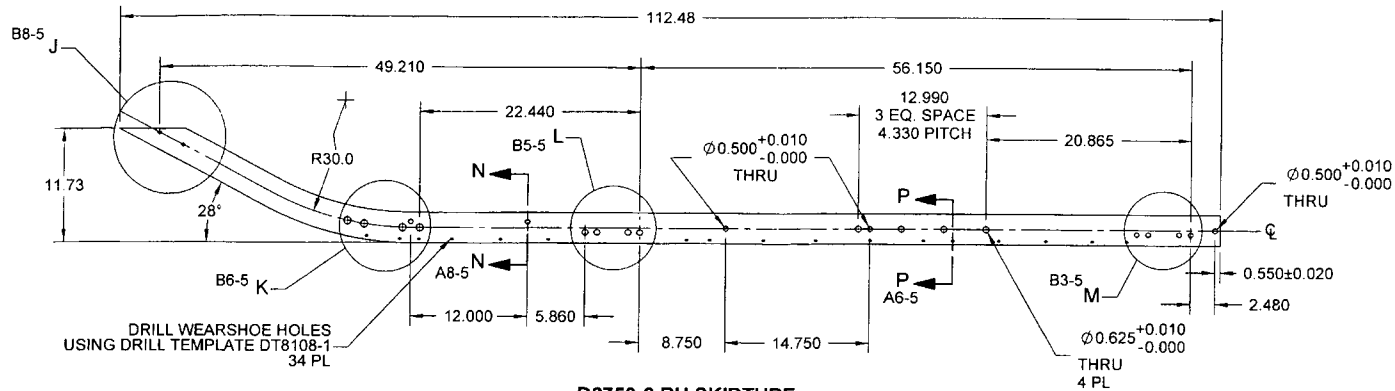
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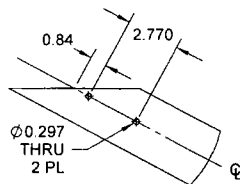
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

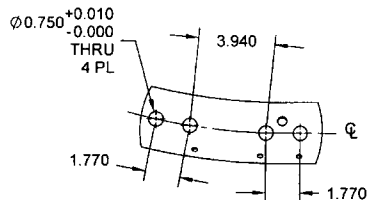
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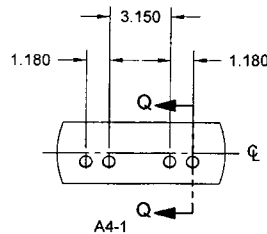
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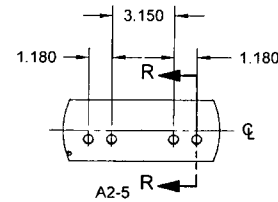
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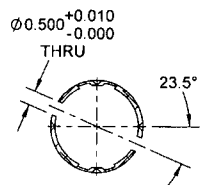
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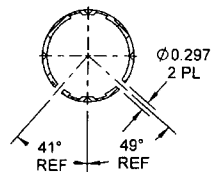
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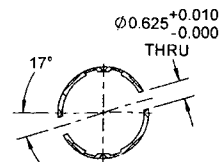
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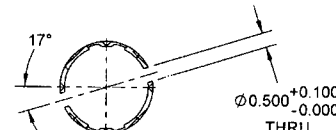
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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DESIGN	PL	DART AEROSPACE USA, INC.	
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CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 5 OF 11
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

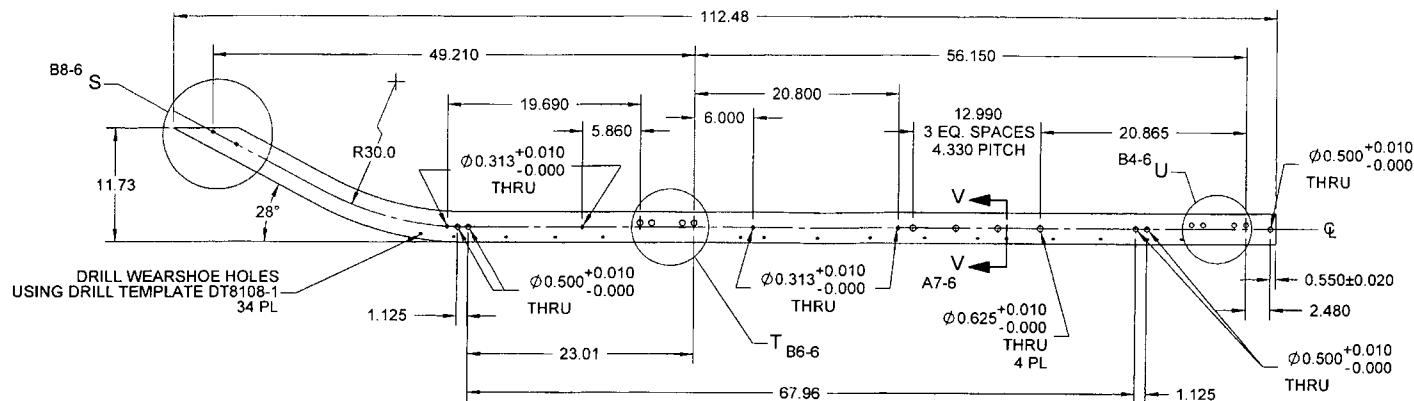
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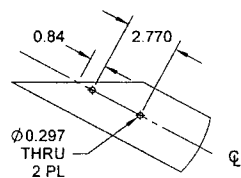
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NOTE: Date & initial all entries

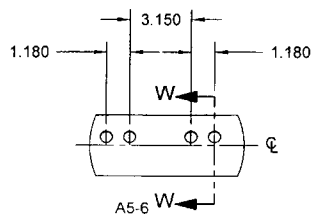
82229



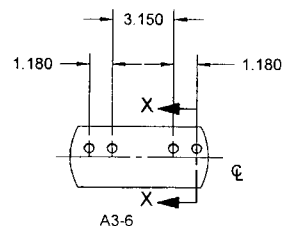
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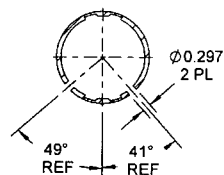
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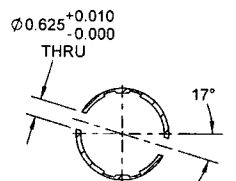
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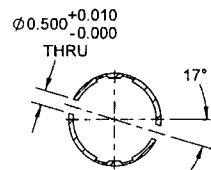
DETAIL U
SCALE 2X



SECTION V-V
SCALE 3X, 17 PL



SECTION W-W
SCALE 3X, 4 PL



SECTION X-X
SCALE 3X, 4 PL

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DESIGN		DART AEROSPACE USA, INC.	
DRAWN		PORT HADLOCK, WA	
CHECKED		DRAWING NO. D2750	REV. F
MFG. APPR.			SHEET 6 OF 11
APPROVED		TITLE 350 SKIDTUBE ASSEMBLY	SCALE NTS
DE APPR.			
DATE	08.07.16		

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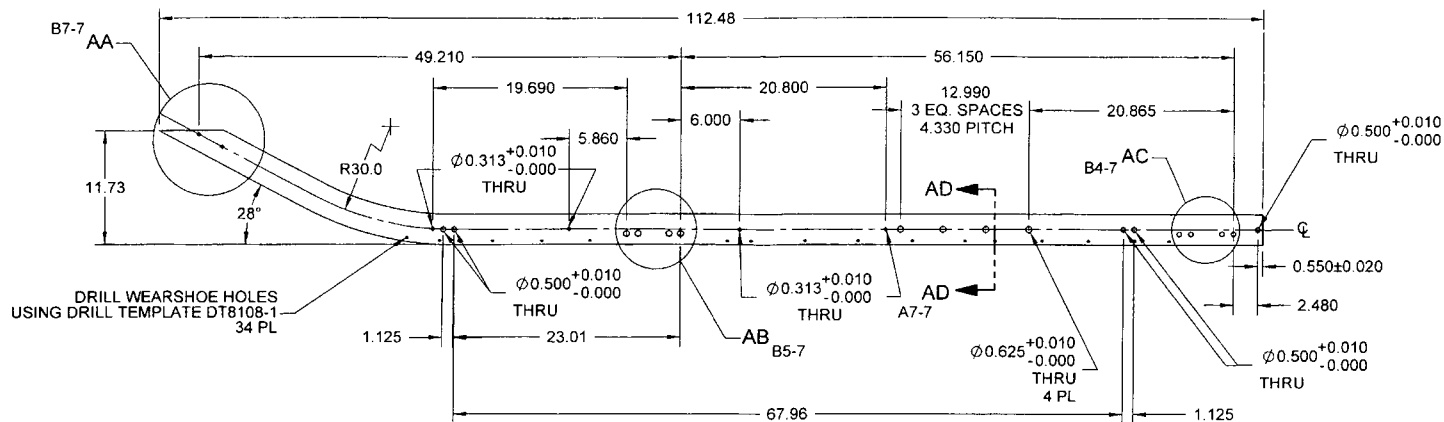
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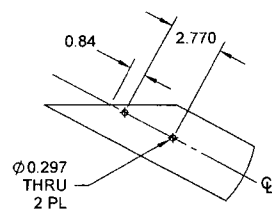
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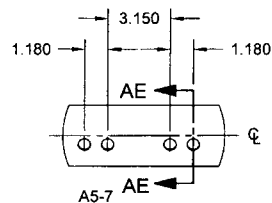
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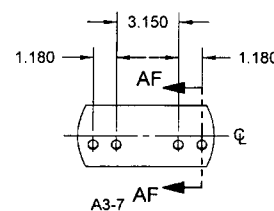
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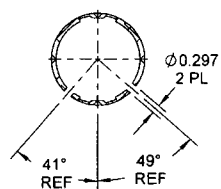
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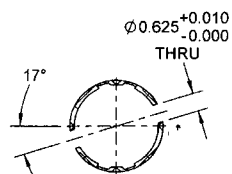
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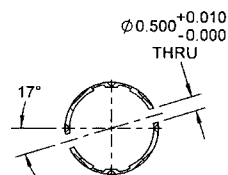
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SCALE 2X



SECTION AD-AD
D3-7
SCALE 3X, 17 PL



SECTION AE-AE
B6-7
SCALE 3X, 4 PL



SECTION AF-AF
B4-7
SCALE 3X, 4 PL

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08-09-2016

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MFG. APPR.		REV. F
APPROVED		SHEET 7 OF 11
DE APPR.		TITLE 350 SKIDTUBE ASSEMBLY
DATE	08.07.16	SCALE NTS

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

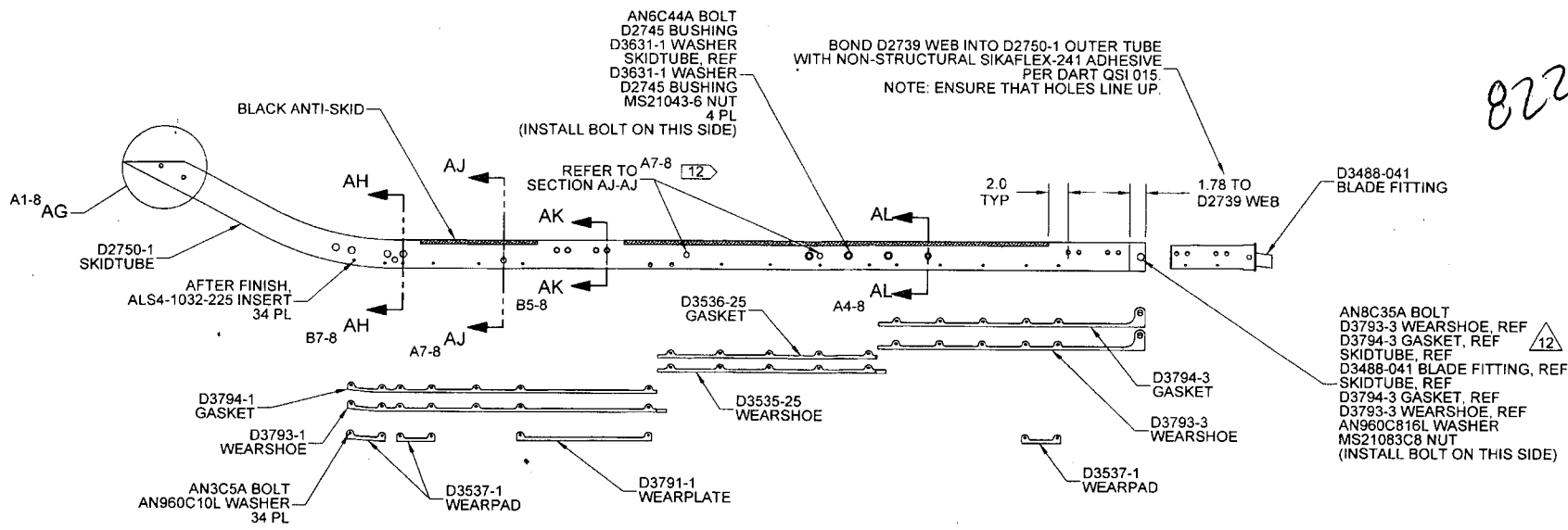
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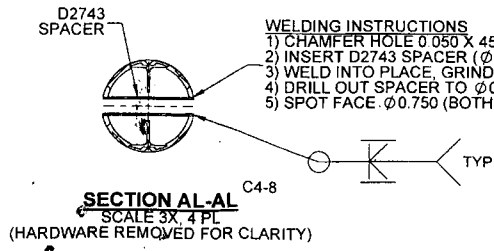
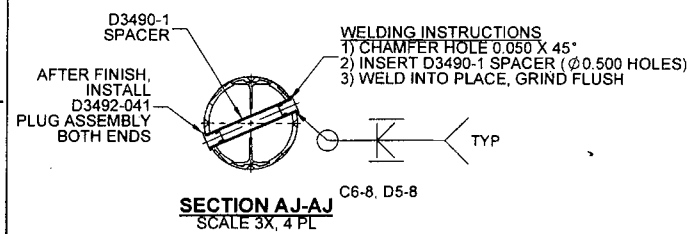
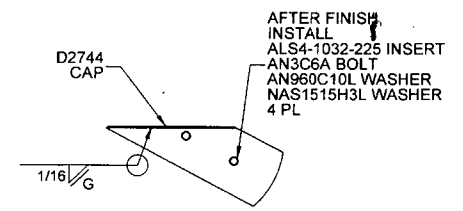
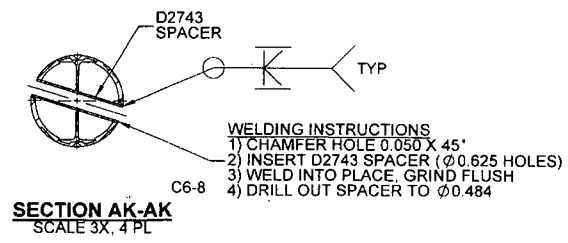
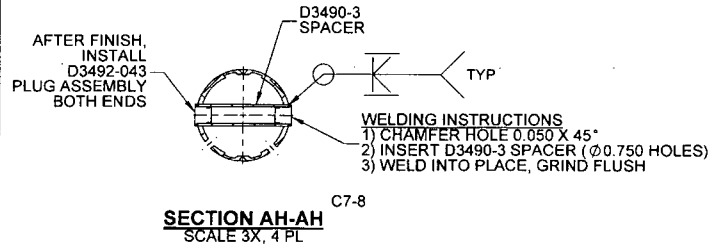
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

82229



D2750-041 350 SKIDTUBE ASSEMBLY, LH



DESIGN	PA	DART AEROSPACE USA, INC.	
DRAWN	PA	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D2750	SHEET 8 OF 11
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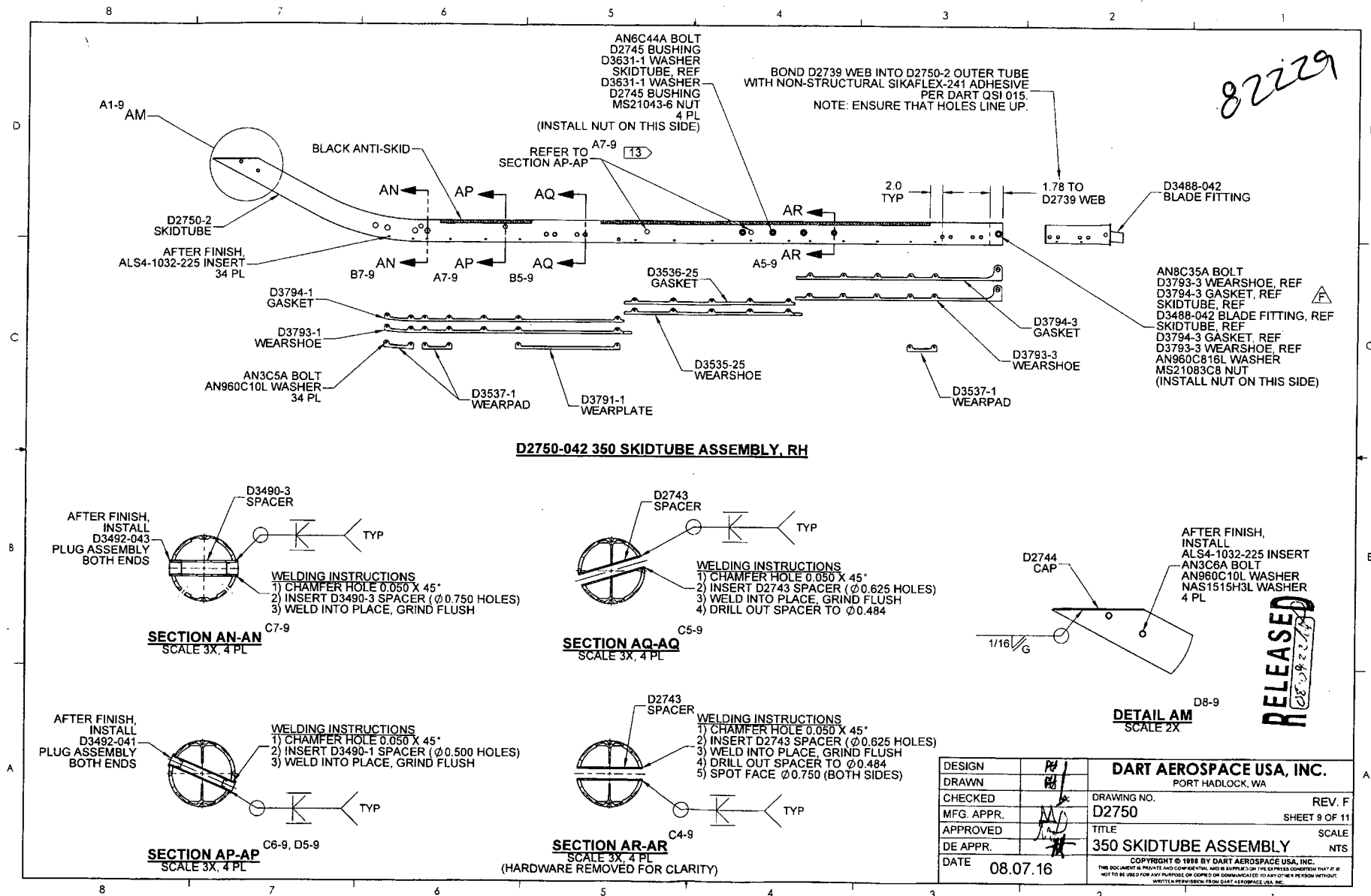
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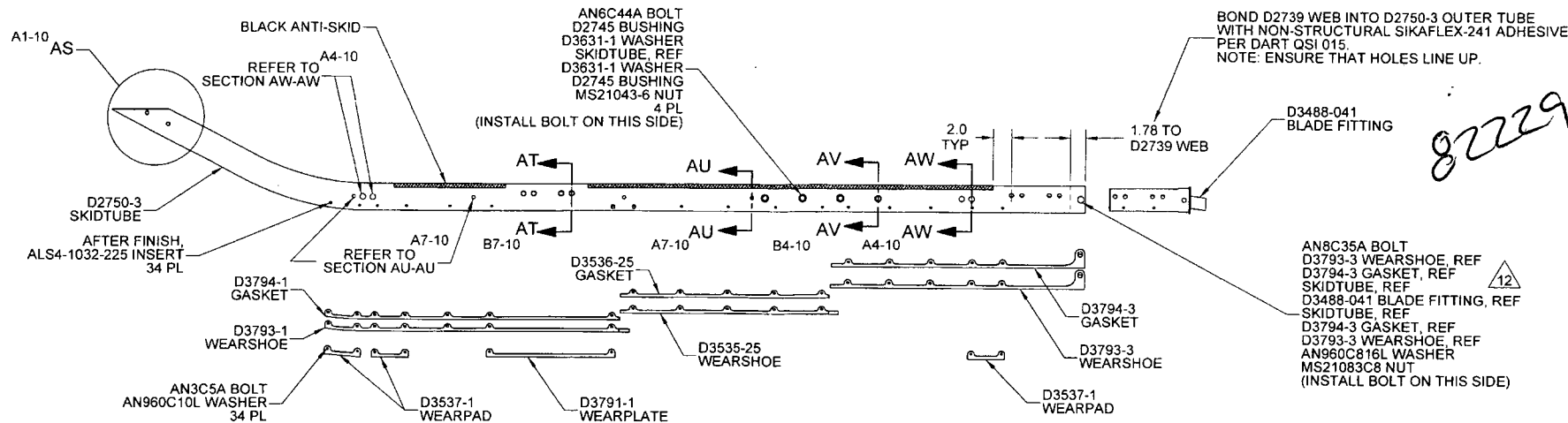
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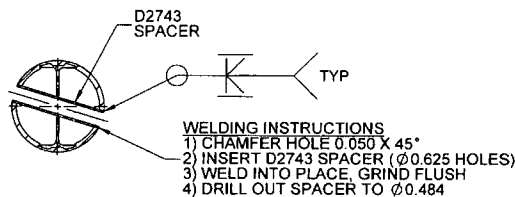
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NOTE: Date & initial all entries

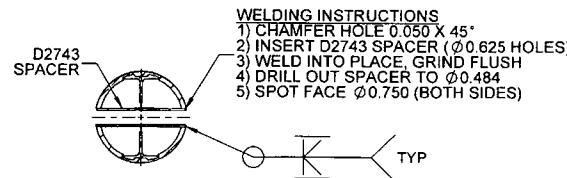
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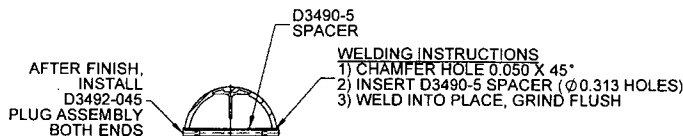
D2750-043 350 SKIDTUBE ASSEMBLY, LH



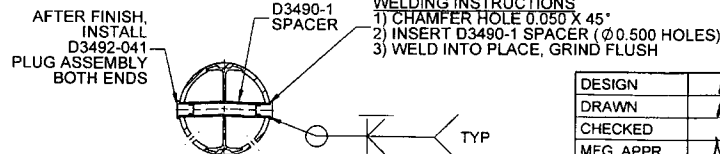
SECTION AT-AT
SCALE 3X, 4 PL



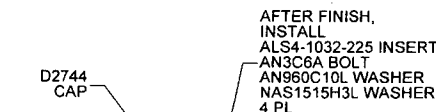
SECTION AV-AV
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION AU-AU
SCALE 3X, 4 PL



SECTION AW-AW
SCALE 3X, 4 PL



DETAIL AS
SCALE 2X

RELEASED
DATE: 07/22/14

DESIGN		DART AEROSPACE USA, INC.
DRAWN		PORT HADLOCK, WA
CHECKED		DRAWING NO. D2750
MFG. APPR.		REV. F
APPROVED		SHEET 10 OF 11
DE APPR.		TITLE SCALE
DATE	08.07.16	350 SKIDTUBE ASSEMBLY NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

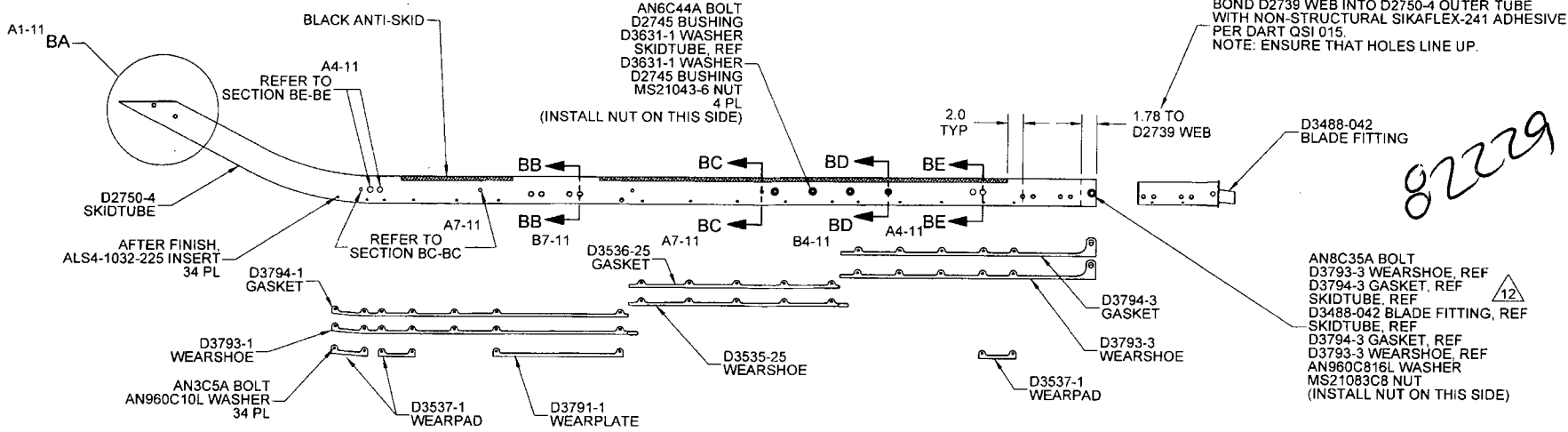
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

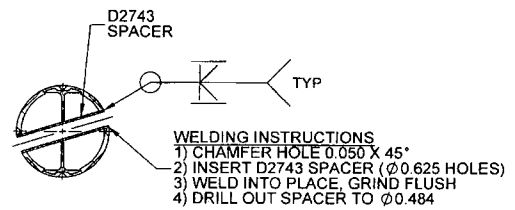
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

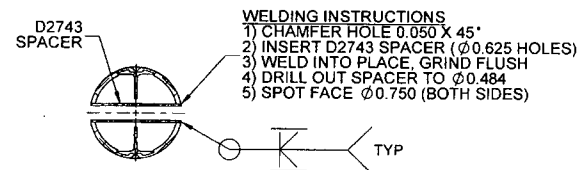
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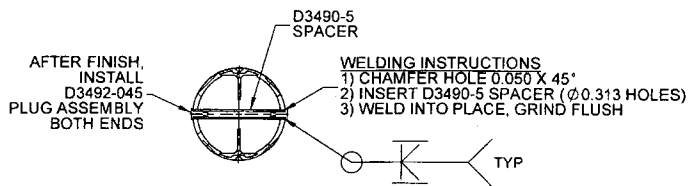
D2750-044 350 SKIDTUBE ASSEMBLY, RH



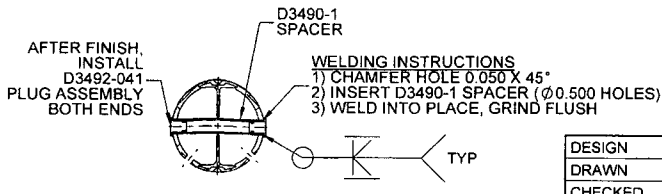
SECTION BB-BB
SCALE 3X, 4 PL



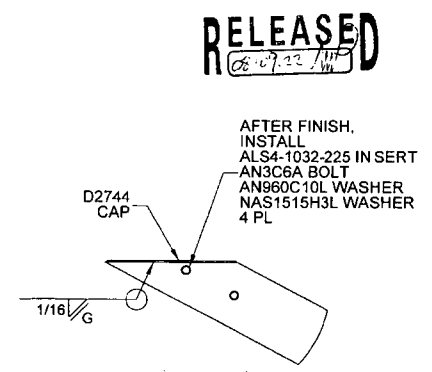
SECTION BD-BD
SCALE 3X, 4 PL
(HARDWARE REMOVED FOR CLARITY)



SECTION BC-BC
SCALE 3X, 4 PL



SECTION BE-BE
SCALE 3X, 4 PL



DETAIL BA
SCALE 2X

DESIGN	HA	DART AEROSPACE USA, INC.	
DRAWN	HA	PORT HADLOCK, WA	
CHECKED	HA	DRAWING NO.	REV. F
MFG. APPR.	HA	D2750	SHEET 11 OF 11
APPROVED	HA	TITLE	SCALE
DE APPR.	HA	350 SKIDTUBE ASSEMBLY	NTS
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RELEASED

82229

8 7 6 5 4 3 2 1

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 286

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 82189
Part number: A350-606-012
Description: Skid tube
Welding Process: Tig[☒] Mig[]
Base material: Alum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier David Lund Date of Test Coupon 12.04.03
Welder Barclay Elliott Date of Test Coupon 12-04-03

The above named individual is qualified in accordance with AWS D17.1.2001 to weld